

## In the Claims

This listing of claims replaces all previous listings.

What we claim is:

1 (canceled).

2 (currently amended). A method according to Claim 45, wherein the component of several measurements of a reference comprises a component of several spectral measurements of a reference.

3 (currently amended). A method according to Claim 45, wherein the component of several measurements of a reference comprises a non-spectral sensor output.

4 (currently amended). A method according to Claim 45, wherein the component of several measurements of a reference comprises a combination of a non-spectral sensor output and a component of several spectral measurements of a reference.

5 (currently amended). ~~A method according to Claim 1, A method of correcting a measurement of a sample, comprising:~~

a) determining a temporal variation of a component of several measurements of a reference, wherein the reference measurement component temporal variation does not substantially rely on changes in the reference;

b) determining a temporal variation of components of measurements of samples that are similar to the measurement of the sample;

c) determining whether the reference measurement temporal variation is similar to the similar sample measurement temporal variation; and, if so;

d) adjusting the measurement of the sample by correcting for the portion of the component corresponding to the similar sample temporal variation that corresponds to the reference measurement temporal variation;

wherein the components of measurements of samples comprise spectral data at a specific wavelength, and wherein the component of measurement of a reference does not include spectral data at the specific wavelength.

6 (currently amended). ~~A method according to Claim 1, A method of correcting a measurement of a sample, comprising:~~

a) determining a temporal variation of a component of several measurements of a reference, wherein the reference measurement component temporal variation does not substantially rely on changes in the reference;

b) determining a temporal variation of components of measurements of samples that are similar to the measurement of the sample;

c) determining whether the reference measurement temporal variation is similar to the similar sample measurement temporal variation; and, if so;

d) adjusting the measurement of the sample by correcting for the portion of the component corresponding to the similar sample temporal variation that corresponds to the reference measurement temporal variation;

wherein the components of measurements of samples comprise combinations of spectral data at specific wavelengths, and wherein the component of measurement of a reference does not include spectral data at the specific wavelengths.

7 (currently amended). A method according to Claim 54, wherein the components of measurements of samples comprise a physical property of a sample other than its spectral response.

8 (currently amended). A method according to Claim 54, wherein the component of several measurements of a reference comprises a physical property of the reference other than its spectral response.

9 (currently amended). A method according to Claim 54, wherein the component of several measurements of a reference comprises a property of the measurement environment.

10 (currently amended). A method according to Claim 45, wherein the component of several measurements of a reference comprises a measurable characteristic of spectral data.

11 (currently amended). A method according to Claim 45, wherein the components of measurements of samples comprise a measurable characteristic of spectral data.

12-17 (canceled)

18 (currently amended). A method according to Claim 45, wherein the similar samples are the sample.

19-29 (canceled)

30 (currently amended). A method according to Claim 54, wherein the sample comprises human tissue.

31 (new). A method according to Claim 6, wherein the component of several measurements of a reference comprises a component of several spectral measurements of a reference.

32 (new). A method according to Claim 6, wherein the component of several measurements of a reference comprises a non-spectral sensor output.

33 (new). A method according to Claim 6, wherein the component of several measurements of a reference comprises a combination of a non-spectral sensor output and a component of several spectral measurements of a reference.

- 34 (new). A method according to Claim 6, wherein the components of measurements of samples comprise a physical property of a sample other than its spectral response.
- 35 (new). A method according to Claim 6, wherein the component of several measurements of a reference comprises a physical property of the reference other than its spectral response.
- 36 (new). A method according to Claim 6, wherein the component of several measurements of a reference comprises a property of the measurement environment.
- 37 (new). A method according to Claim 6, wherein the component of several measurements of a reference comprises a measurable characteristic of spectral data.
- 38 (new). A method according to Claim 6, wherein the components of measurements of samples comprise a measurable characteristic of spectral data.
- 39 (new). A method according to Claim 6, wherein the similar samples are the sample.
- 40 (new). A method according to Claim 6, wherein the sample comprises human tissue.